

U. S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
ASSISTANT SECRETARY FOR HOUSING-FEDERAL HOUSING COMMISSIONER

TO: DIRECTORS, SINGLE FAMILY DIVISION

Series and Series Number: (Supersedes
issued dated August 25, 1992)

MATERIALS RELEASE

NO. 1088c

ISSUE DATE December 11, 1995

REVIEW DATE December 11, 1998

SUBJECT: 1. Product Siplast Roofing Systems

2. Name and Address Siplast, Inc.
of Manufacturer Highway 67 South
Arkadelphia, AR 71923

Data on the nonstandard product described herein have been reviewed by the Department of Housing and Urban Development and determination has been made that it is considered suitable from a technical standpoint for the use indicated herein. This Release does not purport to establish a comparative quality or value rating for this product as compared to standard products normally used in the same manner.

This Materials Release cannot be used as an indication of endorsement, approval or acceptance by HUD of the described product, and any statement or representation, however made, indicating such approval, endorsement or acceptance by HUD is unauthorized. See Code 18, U.S.C. 709.

Any reproduction of this Release must be in its entirety.

USE: The Siplast roofing systems are intended to be used on nominally flat to vertical roof slopes.

DESCRIPTION:

These roofing systems consist of membranes that may be laid over any type deck, prepared substrates and/or insulations which are acceptable to Siplast, Inc. (Siplast), and are in compliance with the appropriate Model Code.

Paradiene 20/30 and Veral/Irex are two-ply roofing membranes consisting of composite modified bitumen sheets incorporating a fiberglass mat core laminated on each side with a material which is a blend of Styrene Butadiene Styrene (SBS) and asphalt. Paradiene 20/30 is used primarily for nominally flat roofs (2 1/2" in 12" maximum slope) and is attached by the use of cold adhesive, heat welding, or set in hot asphalt depending on the substrate as specified by Siplast. Paradiene 30 Top Ply, has a mineral surface. Veral/Irex is used where a metal finish, e.g. aluminum, copper, stainless steel or Spectra finish is desired. A minimum slope of 1/2" in 12" shall be maintained; there is no maximum slope. Attachment to the substrate is accomplished by heat welding the rolled membrane to the substrate by using a propane gas torch.

Parafor 50 is a single ply polyester/glass scrim reinforced modified bitumen membrane with mineral surfacing. Attachment to the substrate is accomplished by heat welding, hot asphalt or cold adhesive. A minimum slope of 1/2" in 12" shall be maintained; there is no maximum slope.

MATERIALS:

All roofing system materials shall be supplied by Siplast or its licensed roofing contractor. Any materials supplied by a contractor e.g. ballast shall be approved in writing by Siplast. Data on physical properties of the membrane (tensile strength, elongation, creep, softening point, brittleness, etc.) are on file in HUD Headquarters and Siplast Headquarters.

Paradiene 20/30 Membrane

Paradiene 20 - Base ply:	Minimum weight = 58 pounds per square; shipped in 3.28 ft. x 50 ft. rolls.
Paradiene 30 - Top ply:	Minimum weight = 82 pounds per square; shipped in 3.28 x 33.5 ft. rolls, and has a granular mineral surface. There is a 2 1/2" selvage edge at the seam.

Veral/Irex Membrane

Irex - Base ply:	Minimum weight = 70 pounds per square; shipped in 3.28 x 34 ft. rolls. The Irex material is also used as flashing.
Veral - Top ply:	Minimum weight = 86 pounds per square; shipped in 3.28 ft. x 33.5 ft. rolls. The Veral sheet has a metal foil top facing. There is a 2 1/2" selvage edge for the seam. The Veral material is also used as flashing.

Parafor 50 Membrane

Single Ply:	Minimum weight = 140 pounds per square; shipped in 3.28 ft. x 26.0 ft. rolls. There is a 3 1/2" selvage edge.
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- Paraglas - Paraglas ply sheet is an asphalt-coated fiberglass mat which meets Federal Specification SS-R-620B, Type III, and meets the requirements of ASTM D-2178, Type IV. It is designed for use under most Siplast roof systems that require a nailable substrate.
- Parabase - Parabase is an asphalt coated glass fiber base sheet which meets ASTM D-4601 Type II. Parabase is designed for use under Siplast roof systems in nailable applications.
- Trafbloc - Trafbloc is designed as a protective course to be used in roof areas where there is pedestrian traffic or mechanical maintenance. It is composed of chopped rubber particles and synthetic binders. Trafbloc is .31 inch thick, and is available in rolls, 30.5 inches x 32.5 ft. It can be applied with hot asphalt or adhesive.
- Paratread - Paratread is a modified bitumen sheet material designed to be used as a protective course in roof areas with anticipated high pedestrian traffic or mechanical abuse potential. It is composed of asphalt impregnated, puncture resistant polyester fabric, coated with a polymer modified bitumen topped with a ceramic-coated granule wearing surface. Paratread is 0.22 inch thick and is supplied in rolls 2.5 ft. x 20 ft. Paratread is adhered to Siplast roofing membranes using PA-1021 Plastic Cement.

PA-311 Adhesive

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PA-311 Adhesive is designed for use with cementitious or high porosity substrates; meets or exceeds ASTM D-4479, Type II requirement. It can be applied by brush, roller or spray at a rate of 65 square feet per gallon. The porosity of some substrates may require heavier applications of adhesive to ensure adhesion. Membranes should be rolled after application to ensure complete contact with the adhesive. To facilitate application at temperatures below 40°F, the adhesive shall be stored for 24 hours at a temperature between 60°F and 80°F prior to use.

Primer - 1125

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Primer, PA-1125, shall conform to ASTM D-41 or Federal Specification SS-A-701B. All metal flanges, and concrete and masonry surfaces shall be primed and allowed to dry thoroughly prior to roofing and flashing application.

PA-1021
Plastic Cement

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PA-1021 Plastic Cement is a general purpose cement produced from refined asphalt and petroleum solvents with non-asbestos fibers added for reinforcement. PA-1021 is an all weather grade plastic cement. PA-1021 Plastic Cement is specifically designed for use with SIPLAST guaranteed roofing systems as a mastic for setting all metal flanges and drain lead flashings. PA-1021 meets or exceeds the requirements for ASTM D-4586 Type II for asbestos free, asphalt based roof cement.

Asphalt - Steep grade asphalts (ASTM D312-98 Type IV) shall be used for all mopping. The Equiviscous temperature (EVT) method of asphalt temperature determination shall be used in adhering the Paradiene and Parafor roof systems. Asphalt containers or bulk shipping tickets shall indicate the EVT, the Finish Blowing Temperature (FBT), the Softening Point (SP) and the Flash Point (FP). Asphalt shall not be heated above the FP, and heating at FBT shall be avoided. Application temperature shall not be more than (EVT) $\pm 25^{\circ}\text{F}$. If EVT information is not provided, refer to Siplast Roofing System & Specification 1992, or call 1-800-922-8800. All asphalt layers must be total in coverage, without breaks or voids.

Under cold weather conditions (40°F and below including wind chill) precautions must be taken to ensure that the asphalt is within the EVT temperature range at the point of application.

Asphalt must not be overheated to compensate for cold conditions. Insulated handling equipment under these conditions shall be used. During application, asphalt shall never be applied more than five feet ahead of the roll, which shall be unrolled continuously at a steady pace. Pressure shall be kept on the roll at all times to ensure proper embedment. Air pockets beneath the system or between plies are unacceptable. Any such pockets should be "walked in" immediately while the asphalt is hot.

Insulation Insulation shall be approved by Siplast Roofing System; and shall be compatible with the substrate and attached to the deck in accordance with the insulation manufacturer's instructions.

ROOF DECK AND SUBSTRATE PREPARATION REQUIREMENTS:

Siplast acceptance of a deck to receive roofing is based strictly on the satisfactory condition of the surface to be roofed. Preparation of the substrates of selected roof decks shall comply with the latest edition of the Siplast Roofing System Specifications. Design of the roof deck is the responsibility of the owner or his architect/engineer.

SINGLE PLY ROOFING INSTITUTE WIND DESIGN GUIDE

WIND AND FIRE CLASSIFICATION:

Mechanically fastened roofing systems shall be designed to resist wind uplift forces as determined in the Wind Design Guide for Mechanically Fastened Single-Ply Roofing Systems published by the Single Ply Roofing Institute (SPRI).

Ballasted roofing systems shall be designed in accordance with the Wind Design Guide for Ballasted Single-Ply Roofing Systems published by SPRI.

Fire Classification shall be in accordance with Underwriters Laboratories, Inc. (UL), or Factory Mutual Engineering Corporation (FM) construction details. To qualify for fire rating and uplift resistance, the system shall be in the current UL or FM Listings.

INSTALLATION:

Compliance with this MR requires all SIPLAST pre/job procedures be followed. This is for a SIPLAST GUARANTEED ROOF MEMBRANE SYSTEM. For more detailed information and specifications, call 1-800-922-8800 or 1-800-643-1591.

All the Siplast Roofing Systems, including insulation, shall be installed by a Siplast approved roofing contractor.

Membrane installation shall be in accordance with the Siplast Specifications, dated 1992, for the placing, bonding, lap splicing, perimeter attachment, flashing, construction closure, walkways and any other work to provide a watertight roofing system.

INSPECTION AND WARRANTY:

A designated representative of Siplast shall make inspection of the installation at the following intervals: (1) prior to delivery of materials, to accept or reject the roof deck to which the Siplast Roofing Systems are to be applied, (2) during the installation, to inspect and approve the installation techniques and methods and (3) upon completion, to give final approval to the installation.

A ten year warranty shall be given to the owner by Siplast, Inc. and shall read as follows:

Siplast, Inc. hereby warrants to the owner of its roofing system as described herein (system), which system has been installed by an applicator approved by Siplast, that the system will remain in a watertight condition for a period of ten years from the date of installation, and in the event of failure of the aforesaid system to function as warranted above, whether on account of defective materials, faulty installation, or on account of normal processes of wear and aging, Siplast will make or cause to be made such repairs and maintenance necessary to enable the system to perform as warranted above.

Conditions of the Warranty

Siplast's obligations to repair or maintain the system under this warranty shall not be in force or effect unless: (1) Siplast is promptly notified of any failure of the system covered by the Warranty within thirty (30) days following such failure; (2) the system is installed by an applicator approved by Siplast; and (3) no alterations or repairs to the system are made without the prior written approval of Siplast as to the extent, methods, and materials used.

Liabilities Excluded From Coverage of This Warranty

1. Siplast assumes no liability for damage to the building on which the system is situated, nor for damage to the contents thereof, nor to any other property or persons, nor for any incidental or consequential damages.
2. Siplast assumes no liability for any failure of the system resulting from winds which exceed the design wind forces as specified by ASCE 7-88, Acts of God, including lightning, earthquake; nor for any failure of the system caused by structural defects of the building on which the system is situated; nor from deliberate misuse of the system, nor for any failure of the system caused by leakage or any other cause from an adjacent structure.

No other Expressed Warranty

No other warranty, expressed or implied, is hereby given, and no affirmation by Siplast, Inc. by words or otherwise shall constitute any such warranty. The terms and conditions hereof contain the entire agreement between the parties hereto, and may not be altered in any manner whatever, unless by writing.

MANUFACTURER'S RESPONSIBILITIES:

Issuance of this Materials Release (MR) commits the manufacturer to fulfill, as a minimum, the following:

1. Produce, label and certify the material, product or system in strict accordance with the terms of this MR.
2. Provide necessary corrective action in a timely manner for all cases of justified complaint, poor performance or failure reported by HUD.
3. When requested, provide the Office of Manufactured Housing and Regulatory Functions, Manufactured Housing and Construction Standards Division, HUD Headquarters, with a representative list of properties, in which the material, product or system has been used, including complete addresses or descriptions of locations and dates of installation.
4. Inform HUD in advance of changes in production facilities, methods, design of the product, company name, ownership or mailing address.

EVALUATION:

This MR shall be valid for a period of three years from the date of initial issuance or most recent renewal or revision, whichever is later. The holder of this MR shall apply for a renewal or revision 90 days prior to the Review Date printed on this MR. Submittals for renewal or revision shall be sent to HUD Headquarters. Appropriate user fees shall be sent to:

U. S. Department of Housing and Urban Development
Technical Suitability of Products Fees
P. O. Box 954199
St. Louis, MO 63195-4199

The holder of this MR may apply for revision at any time prior to the Review Date. The revision may be in the form of a supplement to the MR.

If the Department determines that a proposed renewal or supplement constitutes a revision, the appropriate User Fee for a revision will need to be submitted in accordance with Code of Federal Regulations 24 CFR 200.934, "User Fee System for the Technical Suitability of Products Program," and current User Fee Schedule.

CANCELLATION:

Failure to apply for a renewal or revision shall constitute a basis for cancellation of the MR. HUD will notify the manufacturer that the MR may be canceled when:

1. conditions under which the document was issued have changed so as to affect production of, or to compromise the integrity of the accepted material, product, or system,
2. the manufacturer has changed its organizational form without notifying HUD, or
3. the manufacturer has not complied with responsibilities it assumed as a condition of HUD's acceptance.

However, before cancellation, HUD will give the manufacturer a written notice of the specific reasons for cancellation, and the opportunity to present views on why the MR should not be canceled. No refund of fees will be made on a canceled document.

This Materials Release is issued solely for the captioned firm,
and is not transferable to any person or successor entity.
